The Natural Way

That a plant grown "organically" will somehow be healthier because it was nourished by animal manures instead of by manufactured anhydrous ammonia is a silly argument, as was correctly pointed out by Hildebrand (Letters, 15 Sept., p. 944). However, Hildebrand's use of this nonsense as a straw man with which to impugn the rationality of those who seek to restore the chain of life from soil to producer to consumer and back again to the soil reflects a lack of ecological sophistication.

Organic agriculture acknowledges the interdependence of nature and the finite resources of the spaceship Earth. We can continue to insult the ecosystem with broad-spectrum pesticides and herbicides only with grave risk to the stability, also, of those portions of the environment which we parochially view as "beneficial." The continued throwing "away" of animal and vegetable materials which we cannot utilize directly both exhausts the abilities of natural systems to recycle these residues within the very small disposal areas which we select, with consequent pollution of land and water, and leads to further pollution and waste of resources during the mining, processing, and distribution of artificial substitutes for the discarded natural nutrients.

Organic gardeners are aware, on a practical if not always on a theoretical, level that no amount of mineral salts will increase the moisture-holding capacity of a light soil or prevent lateralization in a clay soil. Organic materials are necessary to maintain a favorable soil structure and to buffer variations in soil chemistry.

It is unlikely that the exploitation of the land by ever more ingenious methods can sustain our species on a long-term basis. Organic agriculture seeks to reestablish the ethical concept of stewardship of the land. In spite of the chimerical abstractions of Hildebrand, this is what it's all about.

JAMES HEDGES
8218 Sherrill Street,
Landover, Maryland 20785

Those for and against "organic gardening" both seem to be a bit confused as to exactly what they are arguing about. It is true that ammonia is ammonia, no matter what its source. If your soil tests as needing ammonia, by all means apply the synthetic if you want to. However, it is scarcely debatable that steer manure contains much more than ammonia. Furthermore, regarding the take-up by a plant of the nutritional elements from its soil, it simply cannot pick up what isn't there. The most aggressive spinach root cannot dig more iron out of its environ than is already there, no matter how highly that species is rated as an iron-bearing vegetable. (Not that spinach is all that great.) Commercial fertilizers are fine—as far as they go. However, their compilers might do well to multiply the ingredients so as to cover the multitudinous requirements (not the merely "get-by needs") of fully healthy vegetation. Trace elements, for example, are now a fact of life. Soil analyses, and fertilizers—artificial or "natural"—ought to take *everything* into account.

The chemical ingredients of foods can be argued ad extremis and ad inflammatorio (or whateveris), but one fact does firmly stand: foods truly, or even halfheartedly, "organically" grown *taste* so much better than ordinary products that there is simply no comparison.

KENNETH R. DEARDORF
3613 Alberta Street,
St. Louis, Missouri 63116

Fast Breeder Reactors

Allen L. Hammond's report (News and Comment, 28 Apr., p. 391) on the study (*1*) by T. B. Cochran of the LMFBR (liquid-metal fast breeder reactor) program is provocative. I would like to comment on five points mentioned in Hammond's report: (i) the use of a 7 percent, rather than a 10 percent, discount factor; (ii) the demand for electrical energy; (iii) the technical performance and cost of LMFBR plants; (iv) a crash program to build the breeder; and (v) the amount of uranium reserves.

In most analyses, the discount factor is selected to represent the value of money. A 10 percent discount rate might be appropriate for an analysis in a highly inflationary period or in a period of capital shortage. The LMFBR cost-benefit analysis was based on the 1970 dollar and a 7 percent discount rate. If a 10 percent discount rate were